



PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Application of:)
Ali Keshavarzi et al.)
Application No.: 09/469,406)
Filed: December 22, 1999)
For: DECOUPLING CAPACITORS FOR THIN)
GATE OXIDES)

Examiner: Donghee Kang
Art Unit: 2811

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Assistant Commissioner for Patents
Washington, D.C. 20231

AMENDMENT

Sir:

This is in response to the Office action dated November 8, 2001. Reconsideration of the application is requested.

CHANGES TO THE SPECIFICATION (Clean version)

The following is a clean version of an amended paragraph which is to be substituted for the paragraph on page 7, lines 18 to 29:

"FIG. 5 illustrates MOS-C 50 according to some embodiments of the invention. MOS-C 50 is designated p+/n+ on n-body, according to the above described nomenclature. Vg is Vcc and S/D/B are at 0 (Vss). The curve of FIG. 3 will apply because an n-well is used and the poly and body have a different type. V_{FB} of MOS-C 50 is approximately 1V. V_{GB} = Vcc. If Vcc > V_{FB}, then MOS-C 50 is in the accumulation mode (channel accumulates) and if MOS-C < V_{FB}, then MOS-C 50 is in the depletion mode (channel depletes). When Vcc = V_{FB}, the mode is between accumulation and depletion mode. In some embodiments of the present invention, Vcc

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is less than V_{FB} so that MOS-C 50 will be in the depletion mode and leakage will be reduced. This configuration may require special layout. MOS-C 50 has lower capacitance per unit area A1 but with much lower leakage because of the depletion mode (there are fewer carriers to leak). It has good frequency response, but may have high series resistance. Note that the structure resembles the buried channel MOS transistor structure.”

The following new paragraph is to be added following the paragraph ending at page 11, line 29:

A2 “Some embodiments of the invention may include additional capacitors between the conductors carrying power supply and ground voltages, at least some of which are not in the depletion mode.”